

Name: \_\_\_\_\_

**at1110paper\_\_practice\_\_test (v30)**

1. Expand the following expression into standard form.

$$(3x - 2)(7x + 8)$$

$$21x^2 + 24x - 14x - 16$$

$$21x^2 + 10x - 16$$

2. Solve the equation.

$$(2x + 3)(7x - 8) = 0$$

$$x = \frac{-3}{2} \quad x = \frac{8}{7}$$

3. Expand the following expression into standard form.

$$(3x - 4)(3x + 4)$$

$$9x^2 + 12x - 12x - 16$$

$$9x^2 - 16$$

4. Expand the following expression into standard form.

$$(3x + 7)^2$$

$$9x^2 + 21x + 21x + 49$$

$$9x^2 + 42x + 49$$

5. Factor the expression.

$$x^2 - 3x - 28$$

$$(x + 4)(x - 7)$$

6. Factor the expression.

$$25x^2 - 9$$

$$(5x - 3)(5x + 3)$$

7. Solve the equation with factoring by grouping.

$$15x^2 + 6x - 20x - 8 = 0$$

$$(3x - 4)(5x + 2) = 0$$

$$x = \frac{4}{3} \quad x = -\frac{2}{5}$$

8. Solve the equation.

$$7x^2 - 25x - 61 = 4x^2 - 5x + 2$$

$$3x^2 - 20x - 63 = 0$$

$$(3x + 7)(x - 9) = 0$$

$$x = -\frac{7}{3} \quad x = 9$$